

In the Claims

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Currently Amended) An automated fiber preparation apparatus for an optical fiber, comprising:

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically and simultaneously index a plurality of trays to a plurality of process stations in a direction from the upstream end toward the downstream end in response to a control signal, each of the plurality of trays being configured to hold an optical fiber;

a strip tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the strip tool being constructed and arranged to automatically strip coating from an end portion of the optical fiber in response to a control signal; [[and]]

a cleave tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleave tool being constructed and arranged to automatically cleave the end portion of the optical fiber in response to a control signal; and

a load module positioned at the upstream end of the transporter, the load module being constructed and arranged to automatically load each of the trays onto the transporter in response to a control signal.

2. (Original) The fiber preparation apparatus according to claim 1, wherein the cleave tool is positioned between the strip tool and the downstream end of the transporter.

3. (Original) The fiber preparation apparatus according to claim 1, further comprising a cleaning tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleaning tool being constructed and arranged to automatically clean the end portion of the optical fiber in response to a control signal.

4. (Original) The fiber preparation apparatus according to claim 3, wherein the cleaning tool is positioned between the strip tool and the downstream end of the transporter.

5. (Original) The fiber preparation apparatus according to claim 1, further comprising a spooling tool positioned between the upstream end and the downstream end of the transporter, the spooling tool being constructed and arranged to automatically wind, in response to a control signal, the optical fiber into a coiled fiber that includes at least one coil of fiber with the end portion of fiber extending from the at least one coil.

6. (Previously Presented) The fiber preparation apparatus according to claim 5, wherein the spooling tool is constructed and arranged to place the coiled fiber onto each of the trays.

7. (Original) The fiber preparation apparatus according to claim 5, wherein the spooling tool is positioned between the upstream end of the transporter and the strip tool.

8. (Original) The fiber preparation apparatus according to claim 1, further comprising a ferrule attachment tool positioned between the upstream end and the downstream end of the transporter, the ferrule attachment tool being constructed and arranged to automatically attach a ferrule to the end portion of the optical fiber in response to a control signal.

9. (Original) The fiber preparation apparatus according to claim 8, wherein the ferrule attachment tool is positioned between the cleave tool and the downstream end of the transporter.

10. (Canceled)

11. (Currently Amended) An automated fiber preparation apparatus for an optical fiber, comprising:

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically and simultaneously index a plurality of trays to a plurality of process stations in a direction from the upstream end toward the downstream end in response to a control signal, each of the plurality of trays being configured to hold an optical fiber;

a strip tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the strip tool being constructed and arranged to automatically strip coating from an end portion of the optical fiber in response to a control signal;

a cleave tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleave tool being constructed and arranged to automatically cleave the end portion of the optical fiber in response to a control signal; and

The fiber preparation apparatus according to claim 1, further comprising an unload module positioned at the downstream end of the transporter, the unload module being constructed and arranged to automatically unload each of the trays from the transporter in response to a control signal.

12. (Currently Amended) The An automated fiber preparation apparatus according to claim 1, for an optical fiber, comprising:

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically index a tray, which is configured to hold the optical fiber, to a plurality of process stations in a direction from the upstream end toward the downstream end in response to a control signal, wherein the transporter is configured to support the tray from below and to index the tray in a linear direction while supporting the tray from below;

a strip tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the strip tool being constructed and arranged to automatically strip coating from an end portion of the optical fiber in response to a control signal; and

~~a cleave tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleave tool being constructed and arranged to automatically cleave the end portion of the optical fiber in response to a control signal.~~

13. (Original) The fiber preparation apparatus according to claim 12, wherein the transporter includes a walking beam.

14. (Previously Presented) The fiber preparation apparatus according to claim 1, further comprising a fiber placement tool that is constructed and arranged to reposition the end portion of the fiber on each of the trays in response to a control signal.

15. (Previously Presented) The fiber preparation apparatus according to claim 1, in combination with the plurality of trays.

16. (Previously Presented) The combination according to claim 15, wherein each of the trays has an outer perimeter, each of the trays being constructed and arranged to retain at least one end portion of the optical fiber extending outwardly beyond the outer perimeter.

17. (Currently Amended) An automated fiber preparation apparatus for an optical fiber, comprising:

a plurality of trays, each of the plurality of trays being configured to hold an optical fiber, wherein each of the trays has an outer perimeter, The combination according to claim 16, wherein each of the trays [is] being constructed and arranged to retain opposite ends of the optical fiber extending outwardly beyond the outer perimeter at opposite ends of the tray;

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically and simultaneously index the plurality of trays to a plurality of process stations in a direction from the upstream end toward the downstream end in response to a control signal;

a strip tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the strip tool being constructed and arranged to

automatically strip coating from an end portion of the optical fiber in response to a control signal; and

a cleave tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleave tool being constructed and arranged to automatically cleave the end portion of the optical fiber in response to a control signal.

18. (Original) An automated fiber preparation apparatus for an optical fiber, comprising:

a tray including a fiber receptacle disposed between opposing ends thereof, the fiber receptacle being constructed and arranged to contain the optical fiber therein with opposing end portions of the optical fiber extending toward the opposing ends of the tray;

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically index the tray in a direction from the upstream end toward the downstream end in response to a control signal;

a fiber preparation module including at least one pair of automated fiber preparation tools positioned on opposite sides of the transporter between the upstream end and the downstream end thereof, the at least one pair of fiber preparation tools being constructed and arranged to automatically process the opposing end portions of the optical fiber in response to a control signal.

19. (Original) The fiber preparation apparatus according to claim 18, wherein the at least one pair of automated fiber preparation tools includes at least one of a fiber strip tool, a fiber cleaning tool, a fiber cleave tool, and a ferrule attachment tool.

20. (Original) The fiber preparation apparatus according to claim 19, further comprising a spooling tool positioned between the upstream end and the downstream end of the transporter, the spooling tool being constructed and arranged to automatically wind, in response to a control signal, the optical fiber into a coiled fiber that includes at least one coil of fiber with the end portion of fiber extending from the at least one coil.

21. (Original) The fiber preparation apparatus according to claim 20, wherein the spooling tool is constructed and arranged to place the coiled fiber onto the tray.

22. (Original) The fiber preparation apparatus according to claim 20, wherein the spooling tool is positioned between the upstream end of the transporter and the at least one pair of automated fiber preparation tools.

23. (Original) The fiber preparation apparatus according to claim 18, further comprising a load module positioned at the upstream end of the transporter, the load module being constructed and arranged to automatically load the tray onto the transporter in response to a control signal.

24. (Original) The fiber preparation apparatus according to claim 18, further comprising an unload module positioned at the downstream end of the transporter, the unload module being constructed and arranged to automatically unload the tray from the transporter in response to a control signal.

25. (Original) The fiber preparation apparatus according to claim 18, wherein the tray is constructed and arranged to support the opposing end portions of the optical fiber to extend beyond the opposing ends of the tray.

26. (Original) The fiber preparation apparatus according to claim 25, further comprising at least one fiber placement tool that is constructed and arranged to automatically reposition at least one of the opposing end portions of the optical fiber inboard the tray in response to a control signal.

27. (Previously Presented) An automated fiber preparation apparatus for an optical fiber, comprising:

a transporter having an upstream end and a downstream end, the transporter being constructed and arranged to automatically index a tray, which is configured to hold the optical

fiber, in a direction from the upstream end toward the downstream end in response to a control signal;

a fiber preparation module including at least one automated fiber preparation tool positioned between the upstream end and the downstream end thereof, the at least one fiber preparation tool being constructed and arranged to automatically process an end portion of the optical fiber in response to a control signal;

a load module positioned at the upstream end of the transporter, the load module being constructed and arranged to hold a stack of trays and to automatically load the tray from the stack of trays onto the transporter in response to a control signal; and

an unload module positioned at the downstream end of the transporter, the unload module being constructed and arranged to hold a stack of trays and to automatically unload the tray from the transporter into the stack of trays in response to a control signal.

28. (Original) The fiber preparation apparatus according to claim 27, wherein the fiber preparation module includes at least one of a fiber strip tool, a fiber cleaning tool, a fiber cleave tool, and a ferrule attachment tool.

29. (Original) The fiber preparation apparatus according to claim 27, further comprising a spooling tool positioned between the upstream end and the downstream end of the transporter, the spooling tool being constructed and arranged to automatically wind, in response to a control signal, the optical fiber into a coiled fiber that includes at least one coil of fiber with the end portion of fiber extending from the at least one coil.

30. (Original) The fiber preparation apparatus according to claim 29, wherein the spooling tool is constructed and arranged to place the coiled fiber onto the tray.

31. (Original) The fiber preparation apparatus according to claim 30, wherein the spooling tool is positioned between the upstream end of the transporter and the fiber preparation module.

68. (Previously Presented) The fiber preparation apparatus according to claim 27, further comprising a plurality of trays that are constructed and arranged to be stacked with each other, each of the trays being configured to hold an optical fiber, each of the trays to be automatically loaded onto the transporter from the stack of trays by the loading module and automatically unloaded from the transporter into the stack of trays by the unload module.

69. (New) The fiber preparation apparatus according to claim 11, wherein the cleave tool is positioned between the strip tool and the downstream end of the transporter.

70. (New) The fiber preparation apparatus according to claim 11, further comprising a cleaning tool positioned at one of the plurality of process stations between the upstream end and the downstream end of the transporter, the cleaning tool being constructed and arranged to automatically clean the end portion of the optical fiber in response to a control signal.

71. (New) The fiber preparation apparatus according to claim 70, wherein the cleaning tool is positioned between the strip tool and the downstream end of the transporter.

72. (New) The fiber preparation apparatus according to claim 11, further comprising a spooling tool positioned between the upstream end and the downstream end of the transporter, the spooling tool being constructed and arranged to automatically wind, in response to a control signal, the optical fiber into a coiled fiber that includes at least one coil of fiber with the end portion of fiber extending from the at least one coil.

73. (New) The fiber preparation apparatus according to claim 72, wherein the spooling tool is constructed and arranged to place the coiled fiber onto each of the trays.

74. (New) The fiber preparation apparatus according to claim 72, wherein the spooling tool is positioned between the upstream end of the transporter and the strip tool.

75. (New) The fiber preparation apparatus according to claim 11, further comprising a ferrule attachment tool positioned between the upstream end and the downstream end of the transporter, the ferrule attachment tool being constructed and arranged to automatically attach a ferrule to the end portion of the optical fiber in response to a control signal.

76. (New) The fiber preparation apparatus according to claim 75, wherein the ferrule attachment tool is positioned between the cleave tool and the downstream end of the transporter.

77. (New) The fiber preparation apparatus according to claim 11, wherein the transporter is configured to index the tray in a linear direction.

78. (New) The fiber preparation apparatus according to claim 77, wherein the transporter includes a walking beam.

79. (New) The fiber preparation apparatus according to claim 11, further comprising a fiber placement tool that is constructed and arranged to reposition the end portion of the fiber on each of the trays in response to a control signal.

80. (New) The fiber preparation apparatus according to claim 11, in combination with the plurality of trays.

81. (New) The combination according to claim 80, wherein each of the trays has an outer perimeter, each of the trays being constructed and arranged to retain at least one end portion of the optical fiber extending outwardly beyond the outer perimeter.

82. (New) The fiber preparation apparatus according to claim 17, wherein the cleave tool is positioned between the strip tool and the downstream end of the transporter.

83. (New) The fiber preparation apparatus according to claim 17, further comprising a cleaning tool positioned at one of the plurality of process stations between the upstream end

and the downstream end of the transporter, the cleaning tool being constructed and arranged to automatically clean the end portion of the optical fiber in response to a control signal.

84. (New) The fiber preparation apparatus according to claim 83, wherein the cleaning tool is positioned between the strip tool and the downstream end of the transporter.

85. (New) The fiber preparation apparatus according to claim 17, further comprising a spooling tool positioned between the upstream end and the downstream end of the transporter, the spooling tool being constructed and arranged to automatically wind, in response to a control signal, the optical fiber into a coiled fiber that includes at least one coil of fiber with the end portion of fiber extending from the at least one coil.

86. (New) The fiber preparation apparatus according to claim 85, wherein the spooling tool is constructed and arranged to place the coiled fiber onto each of the trays.

87. (New) The fiber preparation apparatus according to claim 85, wherein the spooling tool is positioned between the upstream end of the transporter and the strip tool.

88. (New) The fiber preparation apparatus according to claim 17, further comprising a ferrule attachment tool positioned between the upstream end and the downstream end of the transporter, the ferrule attachment tool being constructed and arranged to automatically attach a ferrule to the end portion of the optical fiber in response to a control signal.

89. (New) The fiber preparation apparatus according to claim 88, wherein the ferrule attachment tool is positioned between the cleave tool and the downstream end of the transporter.

90. (New) The fiber preparation apparatus according to claim 17, wherein the transporter is configured to index the tray in a linear direction.

91. (New) The fiber preparation apparatus according to claim 90, wherein the transporter includes a walking beam.

92. (New) The fiber preparation apparatus according to claim 17, further comprising a fiber placement tool that is constructed and arranged to reposition the end portion of the fiber on each of the trays in response to a control signal.